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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/485,559	02/11/2000	SARA W. BOEHMER	FL1049USPCT	6181

23906 7590 07/07/2005

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WILMINGTON, DE 19805

EXAMINER
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MANOHARAN, VIRGINIA

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 07/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/485,559

Applicant(s)

BOEHMER ET AL.

Examiner

Virginia Manoharan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

Claims 1-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO A -9703936 and EP -A 0626362.

The above references are applied for the same combined reasons as set forth at page 2 of the previous Office action.

Claims 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Applicants' Disclosure of Admitted Prior Art is illustrated by Japanese patent application No. 07291878 the (AAPA) in view of EP '362 and WO '936.

The above references are applied for the same combined reasons as set forth at page 3, second and third full paragraph of the previous Office action.

Applicant's arguments filed April 8, 2005 have been fully considered but they are not persuasive.

Applicants following arguments such as: "... The WO '936 discloses the separation of HFC -32 from HFC -125, and the EP '362 discloses the separation of HFC -125 from CFC - 115. In other words, they describe different process. The Office action assumes without establishing why a skilled person in this art would conclude that the separation of HFC -32 from HFC-125 is analogous to the separation of HFC-125 FROM CFC-115. Actually , a skilled person in this art knows that the differing functional groups of these compounds causes subtle changes in chemical behavior, i.e., changing either the product or the impurity being separating (sic) prevents any reasonable analogy. Such changes preclude any reasonable extrapolation from a HFC -125/CFC

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–115 system to a HFC-32/HFC-125 system. For this reason, WO '936 and EP '362 are improperly combined. ..." are not persuasive of patentability for the following reasons:

The HFC –32, CFC –115 and HFC –125 are all present in WO '936 and in the claimed invention. Compare the preamble of claim 1 with the abstract of WO '936. That is, the abstract of WO '936 suggests separating CFC –115 from HFC –32 and from HFC –125 by azeotropic or extractive distillation. Claim 1 is directed to separating HFC-32 from at least one of halocarbon including CFC-115 and HFC –125. Thus, the concept of replacing or substituting the CFC –115 of EP '362 with the HFC –32 of WO '936 or vice versa to arrive at the claimed HFC –32/HF- 125 being separated would be within the purview of an artisan especially since the compounds being separated overlap one another and/or are all present in the same separation by distillation process (not a different process, as argued). It is noteworthy that Section 103 requires us to presume full knowledge by the inventor of the prior art in the field of his endeavor In re Winslow, 151 USPQ 48. An artisan would also appreciate that the process of distillation effects separation of a substance mixture based on differences in boiling points or according to boiling characteristic, a unit of operation involving physical separation i.e., with no chemical reactions.

Applicants further argument that "...for the same reasons described above, extractive agents used in the systems in EP '362 can not be extrapolated to the systems in JP '878 and WO '936. They can not be extrapolated to the system in claim 12 either. Therefore, the combination of JP '878, EP '362 and WO '936 are not proper..." are not considered well –taken for the same reasons as advanced supra.

Claim 5, methylene chloride as well as the other extractive agents are not unobvious nor indicative of criticality in the art. The collective teaching of the prior art suggests that they are used equivalently as extractive agents in the separation of halocarbon compounds such as HFC -32, HFC -125 and CFC -115. with a reasonable expectation of success.

Thus, a prima facie case of obviousness is therefore deemed established by the prior art and has not been rebutted .

Replacing the term "comprise" with -consisting of- would place this case in condition for allowance.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Virginia Manoharan whose telephone number is 571-271-1450.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

V. Manoharan  
July 5, 2005



VIRGINIA MANOHARAN  
PRIMARY EXAMINER  
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